

Claims

- [c1] What is claimed is:
1. An apparatus comprising:
an updatable database having data of one or more previous imaging scans stored therein; and
a computer programmed to:
receive a request to initialize an imaging scan from a user;
receive input from the user identifying a desired imaging scan;
access the updatable database and compare data stored therein of the one or more previous imaging scans with data of the desired imaging scan; and
convey results of the comparison to the user.
 - [c2] 2. The apparatus of claim 1 wherein the computer is further programmed to determine a dosage summary of the one or more previous imaging scans executed in accordance with scan parameters similar to those of the desired imaging scan.
 - [c3] 3. The apparatus of claim 1 wherein the computer is further programmed to automatically store data for scan parameters for the desired imaging scan on the updatable database following execution of the desired imaging scan.
 - [c4] 4. The apparatus of claim 3 wherein the computer is further programmed to match the scan parameters for the desired imaging scan with scan parameters of the one or more previous imaging scans and update the data on the updatable database with scan parameter data of the desired imaging scan.
 - [c5] 5. The apparatus of claim 1 wherein imaging scan parameters include at least one of scan type, patient type, patient age, patient gender, patient height, patient weight, diagnostic objective, scanner model, noise index, and reconstruction protocol.
 - [c6] 6. The apparatus of claim 1 wherein the results include an indication of a radiation dosage used to acquire imaging data during the one or more imaging scans conducted in accordance with scan parameters of the desired imaging scan.

- [c7] 7. The apparatus of claim 1 incorporated into a medical treatment facility and electronically connected to a second database, the second database being accessible by at least one other imaging apparatus.
- [c8] 8. The apparatus of claim 7 wherein the computer is further programmed to access the second database prior to the desired imaging scan and further programmed to compare scan parameters for the desired imaging scan with data stored on the second database, wherein the data stored on the second database correspond to imaging scan parameters for one or more imaging scans executed by the at least one other imaging apparatus.
- [c9] 9. The apparatus of claim 7 wherein the second database is remotely located from the medical treatment facility.
- [c10] 10. The apparatus of claim 7 wherein the at least one other imaging apparatus is remotely located from the medical treatment facility.
- [c11] 11. The apparatus of claim 1 incorporated into a CT scanner and wherein the computer is further programmed to redefine the desired imaging scan to reduce x-ray exposure during the acquisition of the CT data.
- [c12] 12. A method of constructing a network for administering imaging sessions, the method comprising the steps of:
providing at least one database for storing a plurality of scan parameter values;
configuring an imaging scanner to be communicatable with the database and further configuring the imaging scanner to automatically transmit scan parameter values for a set of scan parameters to the at least one database following execution of an imaging scan; and
providing a user module connected to the imaging scanner and communicatable with the at least one database and configuring the user module to access the database in response to a user input to determine a summary of prior imaging scans.
- [c13] 13. The method of claim 12 further comprising the step of providing a monitor connected to the user module and configuring the user module to display the summary on the monitor.

- [c14] 14. The method of claim 12 wherein the summary includes a histogram of scan parameter values from the prior imaging scans.
- [c15] 15. The method of claim 12 wherein the summary includes an indication of radiation used to acquire imaging data during the prior imaging scans.
- [c16] 16. The method of claim 12 further comprising the step of remotely locating the imaging scanner from the at least one database.
- [c17] 17. The method of claim 16 further comprising the step of locating the imaging scanner in a medical treatment facility and locating the at least one database remotely from the medical treatment facility.
- [c18] 18. An electronic network comprising:
at least one updatable database configured to store scan parameter values from one or more imaging sessions;
at least one imager configured to acquire imaging data of a subject;
an electronic communications link connected to the at least one updatable database and the at least one imager; and
wherein the at least one imager includes a processor configured to automatically transmit one or more scan parameter values to the at least one updatable database following acquisition of imaging data from the subject.
- [c19] 19. The electronic network of claim 18 wherein the processor is further configured to receive a number of user inputs identifying scan parameter values of an imminent imaging session and compare the scan parameter values for the imminent imaging session with the scan parameter values stored on the at least one updatable database.
- [c20] 20. The electronic network of claim 19 wherein the processor is further configured to determine a composite dosage value from the parameter values stored on the database corresponding to prior imaging sessions executed according to scan parameter values similar to the scan parameter values of the imminent imaging session.
- [c21] 21. The electronic network of claim 18 wherein the at least one updatable

database includes a first database and a second database; and
wherein the first database is located in a first imager and the second database is
located in a second imager remotely located from the first imager.

[c22] 22. The electronic network of claim 21 wherein the first imager is located in a
first facility and the second imager is located in a second facility remotely
located from the first facility.

[c23] 23. The electronic network of claim 18 wherein the at least one imager includes
a first imager located in a first facility and a second imager located in a second
facility remotely located from the first facility and wherein the at least one
database is located in one of the first facility and the second facility.

[c24] 24. The electronic network of claim 18 wherein the at least one imager includes
a first imager located in a first facility and a second imager located in a second
facility remotely located from the first facility and wherein the at least one
database is located in a facility remotely located from the first and the second
facilities and connected to the first imager and the second imager via an
electronic communications link.

[c25] 25. A computer readable storage medium having a computer program stored
thereon and representing a set of instructions that when executed by one or
more computers causes the one or more computers to:
access a database having scan parameter data stored thereon, the scan
parameter data corresponding to scan parameters of one or more executed
imaging sessions;
compare user input identifying scan parameters of an imminent imaging session
to at least a portion of the scan parameter data stored on the database; and
determine preferred scan parameters for the imminent imaging session from
the scan parameter data stored on the database from the one or more executed
imaging sessions executed in accordance with scan parameters similar to those
identified by the user input.

[c26] 26. The computer readable storage medium of claim 25 wherein the database is
located in memory of an imaging apparatus used to execute the imminent

imaging session.

[c27] 27. The computer readable storage medium of claim 25 wherein the database is located remotely from an imaging apparatus used to execute the imminent imaging session.

[c28] 28. The computer readable storage medium of claim 25 wherein the imaging apparatus is located in a treatment facility and the database is located remotely from the treatment facility.

[c29] 29. The computer readable storage medium of claim 28 wherein the set of instructions further causes the one or more computers to access the database via an electronic communications link.

[c30] 30. A method of prescribing an imaging session comprising the steps of: inputting a number of scan parameters of an imminent imaging session; comparing the number of scan parameters of the imminent imaging session to a number of scan parameters of one or more previously executed imaging sessions; and based on the comparison, allowing modification of radiation dosage for data acquisition for the imminent imaging session.

[c31] 31. The method of claim 30 further comprising the step of accessing a database having data stored thereon corresponding to the one or more previously executed imaging sessions.

[c32] 32. The method of claim 30 further comprising the step of accessing the database via a communications link.

[c33] 33. The method of claim 32 wherein the database is remotely located from a situs of the imminent imaging session.

[c34] 34. The method of claim 31 further comprising the step of automatically storing the number of scan parameters and dosage used during execution of the imminent imaging session on the database.

[c35] 35. A method of prescribing an imaging scan comprising the steps of:

defining a proposed scan protocol;
retrieving scan data from at least one similar scan prescription based on the proposed scan protocol;
comparing dose exposure of the scan data with that of the proposed scan protocol; and
allowing adjustment to the proposed scan protocol to reduce dose exposure if the comparison results in excessive deviation.

[c36] 36. The method of 35 wherein the proposed scan protocol is based on at least one of an exam type, a demographics selection, a scanner model, patient characteristics.

[c37] 37. The method of claim 36 wherein:
the exam type includes at least one of head, face and sinuses, vertebral trauma, chest, lung, heart, abdomen, liver, spleen, and pelvis;
the demographics selection includes at least age, gender, age group, and weight group; and
the patient characteristics include at least weight, age, and gender.

[c38] 38. A method of prescribing an imaging scan comprising the steps of:
prescribing a scan to acquire imaging data of a subject;
accessing at least one database having data stored thereon from executed scans;
retrieving scan data from the database corresponding to executed scans similar to the prescribed scan; and
executing the prescribed scan with scan parameters defined by the scan data retrieved from the database.